

ELECTROLYTIC TILT SENSOR HAVING A MENISCUS INHIBITOR

Abstract of the Invention

A meniscus inhibitor for an electrolytic tilt sensor having a metallic containment envelope having at least two apertures formed therein and an interior chamber, an electrolytic solution partially filling the chamber, and at least two electrodes, each electrode having an electrolytically active portion located within the chamber and a lead portion extending to the exterior of the envelope through a corresponding one of the apertures. The meniscus inhibitor is located within the interior chamber and is a nonporous, chemically resistant, high dielectric material which surrounds the electrodes and is in contact with a peripheral wall of the interior chamber. Also disclosed is an electrolytic tilt sensor having improved linearity and response time, and which includes a metallic containment envelope defining a chamber and having a plurality of apertures therethrough; an electrolytic solution partially filling the chamber; a plurality of electrodes, each electrode extending through a corresponding one of the apertures and having an electrolytically active portion located within the chamber and spaced apart from an interior surface of the envelope and a lead portion extending to the exterior of the envelope, at least one of the electrodes being a sensing electrode and at least one electrode being a common electrode; and a meniscus inhibitor located within the interior chamber and being a nonporous, chemically resistant, high dielectric material surrounding the electrodes and in contact with a peripheral wall of the interior chamber.